



# SELF-DESCRIBING ASSET CATALOG

## MOTIVATION



- Digital Assets are essential for any enterprise
- Digital Assets are diverse
- Digital Assets are ubiquitous and need to be distributed, they frequently end up in incompatible environments due to distribution
- Digital Assets are essential for collaborative science and engineering

## THE PROBLEM



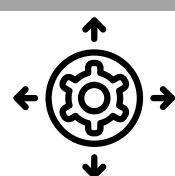
A mechanism to share digital assets  
Whether the digital asset is data or an AI model

Which is simple  
Can be started off in a simple manner

Which is flexible  
Does not impose constraints on what is shared

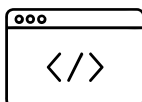
Which is extensible  
Allows for additional information as needed

## APPROACH



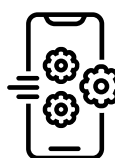
- Associate metadata with digital assets
- Make assets self-describing
- Use GitHub as the backend to store and maintain the digital assets
- Make it easy to create, update, delete and search the digital assets

## CLI TOOL



- A GitHub CLI extension that can be downloaded and installed by anyone
- Each asset is associated with metadata.json file which describes the asset

## FEATURES



- Create an asset, update an asset, search an asset and delete an asset
- Any updates to an existing digital asset, the user can check/ track the updates

```
dapp --zsh 92x24

solomon@SOLOMONs-MacBook-Air-8 dapp % gh digital_asset --help
usage: digitalassets [-h]
                    {update-file,createrepo,clone,downloadRepo,downloadFile,listContents,readMetadata,deleteFile,search}
                    ...

Simple helper commands to interact with Github Repos

positional arguments:
  {update-file,createrepo,clone,downloadRepo,downloadFile,listContents,readMetadata,deleteFile,search}

  createrepo           Testing help command
                       Create a digital asset repo on GitHub
  downloadRepo         Provide the name of the repo to download it as Zip or Tar file
  downloadFile         Download an individual file from the repo. Requires repo name
                       and file name
  listContents         List the contents of the repo
  readMetadata         Read the metadata file from the repo
  deleteFile           Delete a file from the repo. Requires repo name and file name

options:
  -h, --help           show this help message and exit
solomon@SOLOMONs-MacBook-Air-8 dapp %
```

```
dapp --zsh 89x22

solomon@SOLOMONs-MacBook-Air-8 dapp % gh digital_asset search --topics sample-asset-topic

1
Name: sample-digital-asset
Link: https://github.com/Harichandana-Vejendla/sample-digital-asset
Uploaded By: Harichandana-Vejendla

2
Name: Owner-2-digital-asset-testing
Link: https://github.com/HarichandanaVejendla/Owner-2-digital-asset-testing
Uploaded By: HarichandanaVejendla

solomon@SOLOMONs-MacBook-Air-8 dapp %
```

